

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A fixing device for injection needles, for pushing onto a thread of an injection apparatus, wherein said fixing device is formed as a cap comprising an open end and a closed end which holds a needle perpendicularly in the middle, and a surface area of the fixing device comprises at least three spring elements fixedly connected to the cap in the region of the ends thereof so that the fixing device is at least slightly spring-elastic in its circumference, the spring elements each comprising bending beams and a notched cams, said notched cams comprising a surface substantially parallel to the surface area and tips ~~of the notched cam~~ and being fixed to the center-point of the bending beams, wherein the notched cams are directed to said thread and the tips of said notched cams perpendicularly engaging with flights of the thread when said cap is pushed onto the thread.
2. (Original) The fixing device for injection needles as set forth in claim 1, wherein each cam has at least two tips which perpendicularly engage with the thread.
3. (Previously Presented) The fixing device for injection needles as set forth in claim 2, wherein said tips of the notched cams provide at least three points of contact with the injection apparatus, at least two of which are not in the same plane.
4. (Original) The fixing device for injection needles as set forth in claim 1, wherein the distance between the tips of each notched cam is at least equal to the height of said flight.
5. (Previously Presented) The fixing device for injection needles as set forth in claim 1, wherein the surface area of the cap comprises a wall, at least a portion of which is substantially rigid so as to not be elastically deformable.
6. (Canceled)

7. (Previously Presented) The fixing device for injection needles as set forth in claim 5, wherein the spring elements are segments of the surface area of the cap, made of the same material, which are connected to the cap in a material bond at upper and lower ends and have a wall thickness which can be elastically deformed and is correspondingly smaller than that of the rigid surface area of the wall of the cap, and comprise the notched cams.
8. (Original) The fixing device for injection needles as set forth in claim 7, wherein the cap, its spring elements and its notched cams are produced from one part.
9. (Original) The fixing device for injection needles as set forth in claim 8, wherein said one part is an injection-molded part.
10. (Original) The fixing device for injection needles as set forth in claim 9, wherein the one part is formed of a thermoplastic plastic.
11. (Original) The fixing device for injection needles as set forth in claim 10, wherein said thermoplastic plastic is PCTG (polycyclohexylene-dimethylene-terephthalate).
12. (Original) The fixing device for injection needles as set forth in claim 1, wherein the injection apparatus comprises a storage container, and wherein one end of the needle protrudes into the cap such that the one end of the needle penetrates into the storage container when the cap is pushed onto the thread of the injection apparatus.
13. (Original) The fixing device for injection needles as set forth in claim 1, wherein the cap comprises a circumference and at least five spring elements with notched cams, said five spring elements at regular intervals around said circumference.
14. (Original) The fixing device for injection needles as set forth in claim 13, wherein the cap has an inner diameter of at least 9 mm.
15. (Original) The fixing device for injection needles as set forth in claim 1, wherein the needle is a hollow needle smaller than 30-gauge.

16. (Previously Presented) A device for connecting an injection needle to an injection apparatus, the device comprising spring elements, said spring elements each comprising a notched cam to provide tips, the tips providing a plurality of possible points of contact between the device and the injection apparatus in at least two planes, and wherein the points of contact engage with the injection apparatus generally perpendicularly and have associated spring forces acting generally perpendicularly on the injection apparatus.

17. (Previously Presented) The device according to claim 16, wherein at least three points of contact are provided by cams carried by the device.

18. (Original) The device as set forth in claim 17, wherein each cam has at least two tips.

19. (Original) The device as set forth in claim 18, wherein said cams have a surface extending between the tips, thereby providing at least two points of contact which are not in the same plane.

20-21. (Cancelled)

22. (Previously Presented) The device according to claim 16, wherein the spring elements are segments of a surface area of the device.

23. (Previously Presented) The device according to claim 16, wherein the cam tips are spaced from each other by a surface, the surface having a length which is substantially the same as the height of a portion of the injection apparatus.

24. (Previously Presented) The device according to claim 16, wherein at least a portion of the device is substantially rigid so as to not be elastically deformable, and wherein the spring elements are segments of the device, made of the same material as the substantially rigid portion, which are connected to the device in a material bond at upper and lower ends and have a wall thickness which can be elastically deformed and is correspondingly less than that of the rigid portion of the device, and wherein the notched cams are made of the same material.

25. (Previously Presented) The device according to claim 16, wherein the device comprises a circumference and the spring elements are arranged at regular intervals around said circumference.